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C.

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sufficient
An Inaugural Essay.

on

The *Cornus Circinata*,

for

the degree of Doctor of Medicine,

in the University of Pennsylvania,

by

Joseph H. Robinson,
of St. Louis, St. W. Indies.
Phil^a. Feb. 1. 1828.

Sept. 1st 1893

The General

Dear Sir

I have the honor

to acknowledge

the receipt of

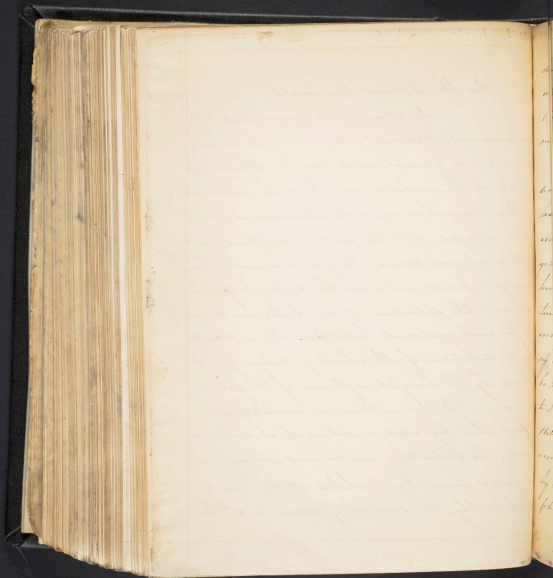
your letter of

"Ea sub oculis posita negligimus; proximum
incuriosi, longinqua spectamus." — Pliny.



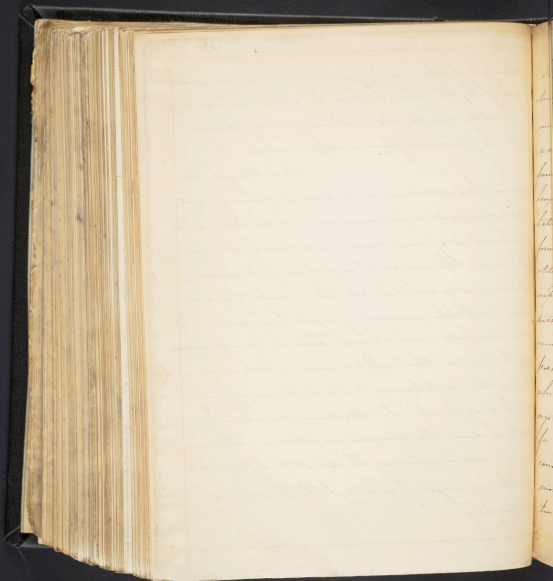
On the Cornus Coccinea.

In attaining its present state of
improvement, Medicine, like most of its kindred
sciences, was gradual in its progress. Though sup-
ported by the unaltered zeal, the noble enthusiasm
& the extensive learning of its cultivators, it was at
times attended with the most unprotected poverty
& the most cruel persecutions. Its fair & honorable claims
were for a period, veiled in the darkness of super-
stition: & the splendour of its objects, were dimmed
by the most irrational hypotheses. It was shackled
by the despotism of the schools of antiquity: & de-
based by the baneful influence of the falsest
reasoning. But from these accumulated evils
& from this degraded condition, it, at last, re-
surrected. Its distinctions were pursued, & its powers
its exalted powers; & now, exhibits all the beauty
of philosophy, the strength of reason and the

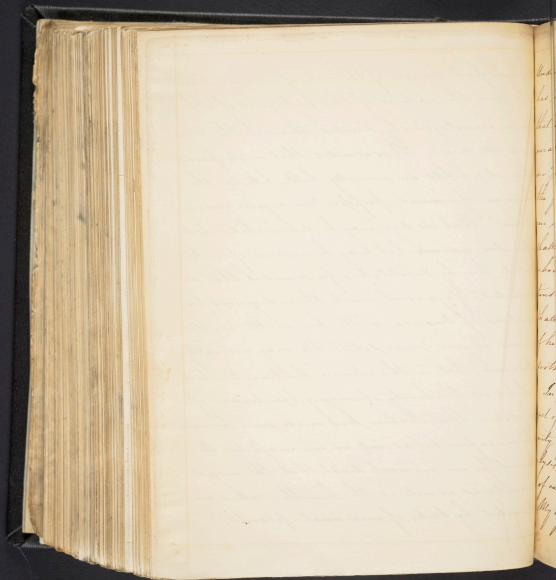


charms of experimental evidence). Let the great
rod of light, though hid for a time by the dense
& murky clouds, its brilliancy is not destroyed,
nor its genial influence diminished.

But, though, the
divine has attained an evident superiority, and,
has regained a permanence, which claims the
adoration of mankind, it certainly does not
yet bear the marks of perfection. A garden,
however, may exhibit all the beauty of a rural
scene & all the richness of vegetation, yet, in its
arrangement, some changes ^{may} ~~will~~ be found neces-
sary to give it that appearance, which shall
be neither displeasing to the sight, nor offensive
to the judgment. In Medicine, much may
still be done. Its domains are extensive, its con-
quests are numerous. It can still be enriched
by the offerings of genius, & the treasures of
philosophy.

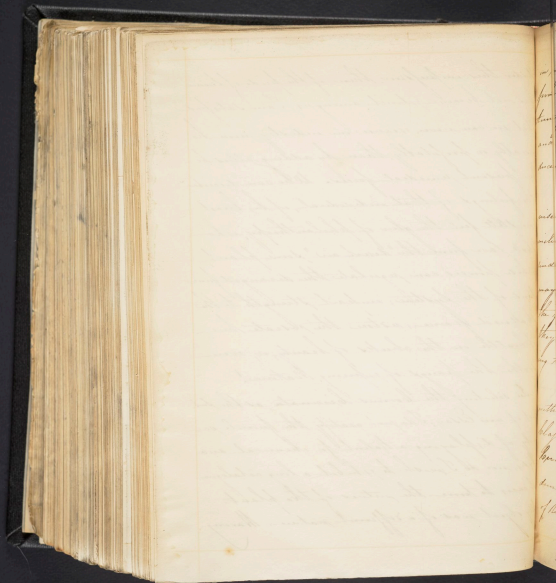


To perfect however of the circle of medical literature, can the portions of the professors of ch. b. more advantageously directed than to the Materia Medica. It is admitted that in its present form, it exhibits an unnecessary bulk, & the use the language of a second professor "an angustia accumulation." But its size may be diminished: its deformities reduced: & it may be rendered of greater utility, here, by substituting for remedies that are imported, if possible, the indigenous productions of America: "Ne hoc, shuttle, multa, omnia allegoriz, minus satis." We may reasonably presume, that in this extensive Continent, which exhibits all the beauty of imagery, & substance of vegetation that Nature has made some provision for our infirmities, as well as our necessities. We cannot for one moment doubt that the majestic mountains as well as the humble valleys are treasured by tribes of medicinal plants.



Under this impression, that, if the pride of science
has not become extinct among us, I am satisfied
that we can never increase our industry, more ho-
perably or profitably, than by adding allies to
our present, remedial forces. Who can describe
the feelings of that individual, of his heart,
can still feel the glow of philanthropy, who
shall save from the "dewy air," some plant,
whose powers can regulate the deranged func-
tions of the system, impart strength to the
withered frame, restore the obsolete line
of health on the cheek of beauty, or, even
soothe the pangs of expiring nature!

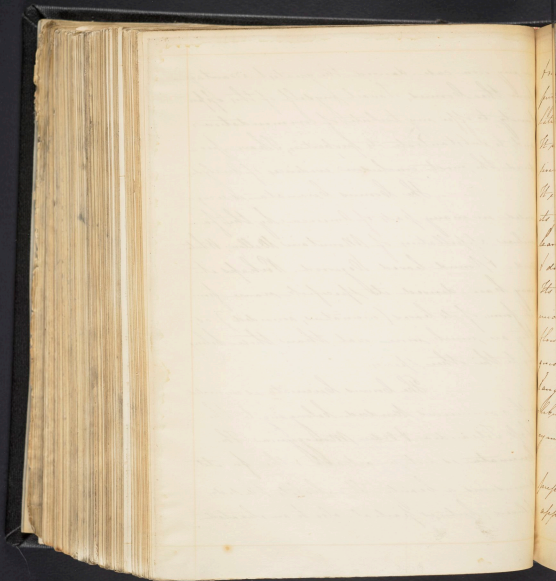
In selecting the *Cornus Circinata*, as the sub-
ject of an Essay, I do not gratify the pride, or
nity of displaying a talent for chemical ana-
lysis; nor do I wish to exhibit a long catalogue
of cases to prove the virtues of the plant.
My object was of a different nature. Having



in my own case derived the greatest advantage
from the Cornus, I avail myself of this oppor-
tunity, to offer my tribute of commendation;
and to substantiate its properties, I have pro-
duced the most conclusive evidences of Analysis.

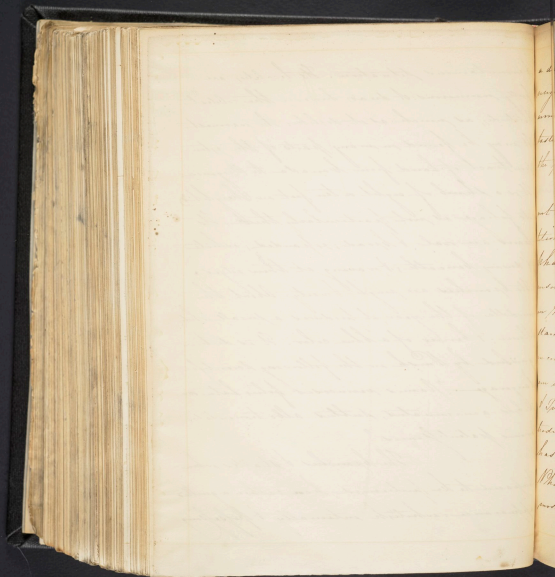
The *Cornus Baccata* is com-
mon in many parts of America, by the In-
dian appellation of Mountain Willow, White
pink & Round-leaved Dogwood. Perhaps it
may have derived its specific name from
the form of its leaves (circumsciss, rounded); as
they are much more oval than those belong-
ing to the other species.

The *Cornus Baccata* is connected
with a numerous kindred belonging to the
class *Tetraneuræ* & Order *Melastomaceæ*. The
Baccata is not remarkable either for its
dimensions or beauty. It inhabits the sides
of Rivers; but is partial also to an elevated



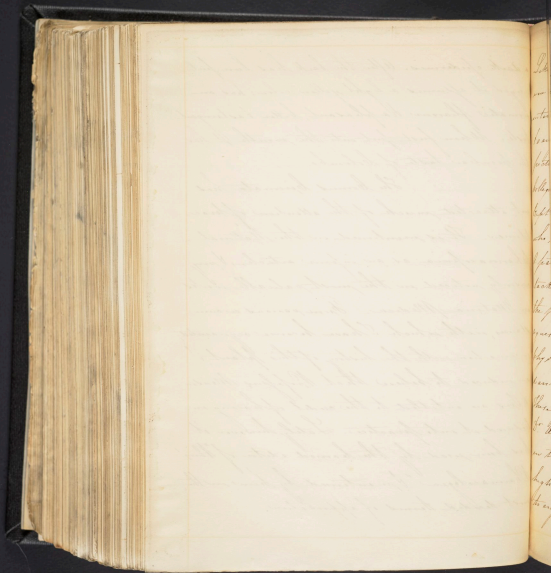
mountainous situation. The localities are
fully numerous; it grows, however the coldest
latitudes, as much as it dislikes the warmest.
It may be found in many parts of the exten-
sive tract of land from Canada to Mexico.
It is a shrub of eight or ten feet in height, &
its foliage is not particularly thick. The
leaves are oval & broad, expanded, white
& downy beneath, & waving at their edges.
The branches are single & woody. About the
middle of the year, it produces a small, white
flower, & berries of a blue color. It is distin-
guished by Michx in the following scientific
language. *Ranunc. verrucosus foliis latioribus
obtusis cinnamomatis, pubes alba tomentosis,
cymis patentibus* &c.

The branches & stalks when
prepared to be pulverized, have rather a queer
appearance: whitish externally & possessing

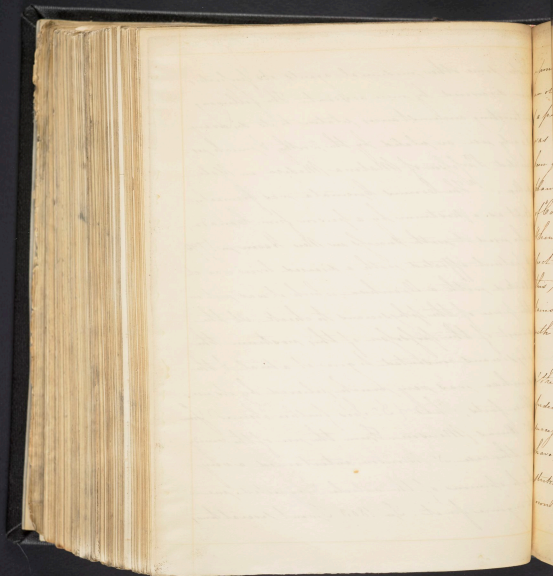


a dark epidermis. After the bark has been peeled
it assumes a light yellow color; has an
aromatic flavour. It is pleasant, bitter & astringent
taste. When first put into the mouth it has
the peculiar taste of Colombo.

The *Cornus bicolorata* has
not attracted much of the attention of prac-
titioners. It is mentioned in the *National*
Pharmacopoeia as an inferior article, & very
casually noticed in the most valuable works
on *Materia Medica*. From personal circum-
stances, with which I have become acquainted,
in connection with the history of this plant, I
am induced to believe that Professors Meisner
& Lons are entitled to the credit of having in-
troduced it into practice. Lately however it
has been used by the learned editor of "*King's*
Pharmacologia" & mentioned by him in the
most decided terms of approbation.

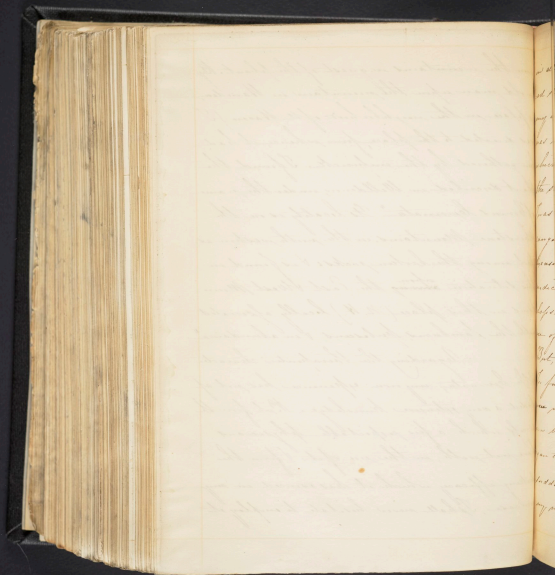


Like some other medicinal agents its properties
were discovered by mere accident. The following
interesting circumstances, relative to its discovery
to early use are related by the worthy & much res-
pected Professor of Materia Medica in Yale
College. The Cornus Coccinea was formerly
kept as a nostrum by a person from Canada,
who used it with success in New Haven in 1796.
A patient affected with a diseased liver was at-
tacked with a Dysenthea, which it was not in
the power of the physicians to check. At the
request of the professor of this nostrum the
physicians consented to give it a trial & the
Dysenthea was very much relieved by it. These
facts, I told Dr. S. his father & learned from
Dr. Rensselaer. From the use of the remedy
in this case Dr. Monson entertained a very
high opinion of the article & requested me
to enquire for it. In 1803 I sent several boxes

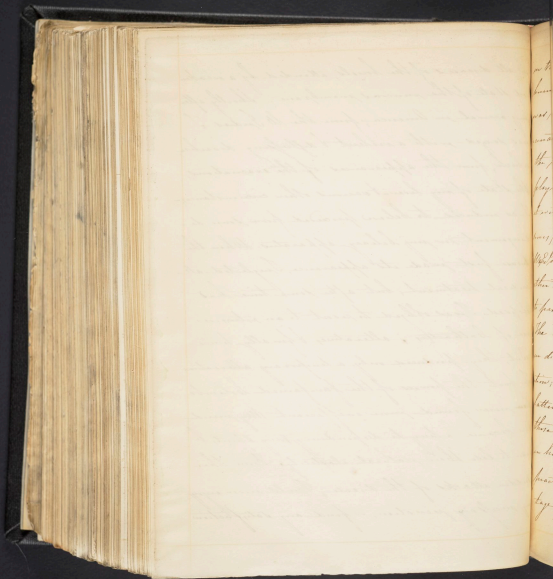


from the mountains in quest of the plant. By
an old man upon the mountains in Masina,
(a place in the neighborhood of M. Nassau) I
was directed to the place, from whence it had
been gathered by the emiricate. I found the
plant described in Willdenow, under the name
of *Cornus bicornata*. Its locality is on the
Whinstone Mountains, on the north western ad-
fect among the broken rocks: & is found in
this situation ^{upon} the East West Moun-
tains in this place (N. W.) locally associated
with the *Sambucus pubescens*. & in abundance.

Regarding the Therapeutic Character
of the bicornata, my own experience has not af-
forded a very extensive knowledge. But from the
success which a few respectable physicians
have met with, in the use of it: & from the
striking efficacy which it has seemed in my
own case, I shall never hesitate to employ it.

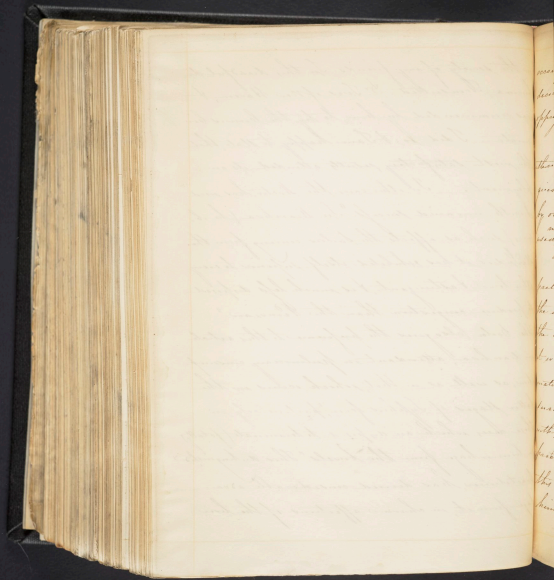


in all diseases of the bowels, attended by a weaken-
ed state of the mucous membrane. Shortly after
my arrival in America, from the St Indies I
was seized with a violent & distressing diarrhea,
which, from the appearances of the evacuations,
the state of my liver & various other circumstances,
I was induced to believe proceeded from some dis-
arrangement in my biliary apparatus. When the
disease first made its appearance, I neglected all
medical treatment, but after some time had
elapsed, I was obliged to resort to an extensive
use of Cathartics, alteratives, & finally Limes.
But, they produced only a temporary alleviation.
In fact, the powers of the far-famed Colombo
were never found more inefficient. My mind
now became a prey to despondency, my spirits be-
gan to lose their natural elasticity. From the
sudden attacks of the disease, I could never enjoy
any necessary recreation, or find any satisfaction



in the society of my friends. In this dreadful dis-
eases, I consulted Dr. Tors of New Haven, &
was recommended by him, to try the Cornus Vir-
ginica. I did so: & I am happy to state, that
the most satisfactory results attended its em-
ployment. In other cases the Doctor has used
it with unequal success. In Menstrua (he ob-
serves) such as affects the sailors coming from the
West Indies, it has exhibited itself superior to every
other tonic & astringent, & is much less disposed
to produce congestion than the Peruvian.

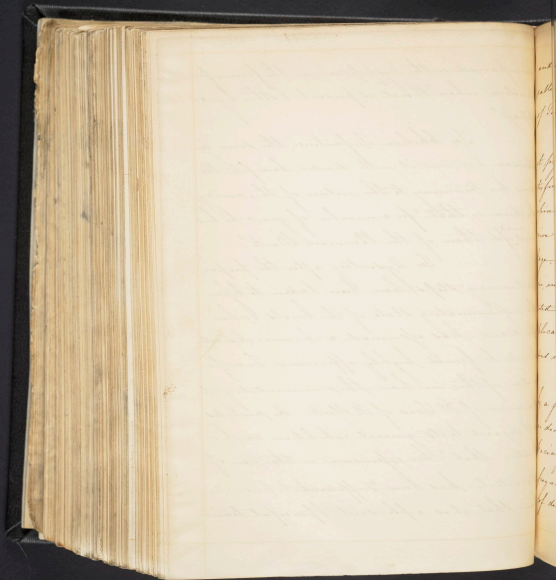
The Doctor also gives the preference to this article
in diarrhoea, attendant on pulmonary consump-
tion, as well as in that, which occurs in the
latter stages of Typhus fever, particularly in
those cases which are disposed to terminate fatally
in hemorrhage from the bowels. This distinguished
practitioner, has derived considerable advan-
tage from it, in chronic affections of the liver



accompanied with Dyspepsia in the form of
secretion, when "thrust is present & other signs
oppose."

In Cholera Infantum, the same
man has used it with decided benefit. He
gives his testimony to the virtues of this remedy
by observing that "for a number of years he had
^{used} ~~used~~ ^{more} of it than of the Peruvian Bark."

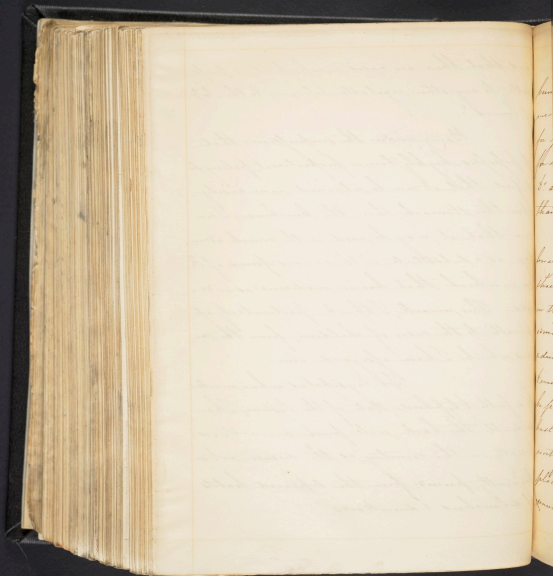
In Dysentery after the proper
preliminary steps have been taken to lessen
the inflammatory state of the bowels, & when
the disease has assumed a chronic character
it will be found highly efficacious. In confir-
mation of this, we have the recommendation of
surgeons of St. Louis of N. York. He permits
with regard to its general reputation in his
practice that "his experience in the use of
this article has been sufficient to persuade
him that it is a pleasant & powerful tonic



and that there are cases in which it is preferable to any other vegetable belonging to the class of Tonics.

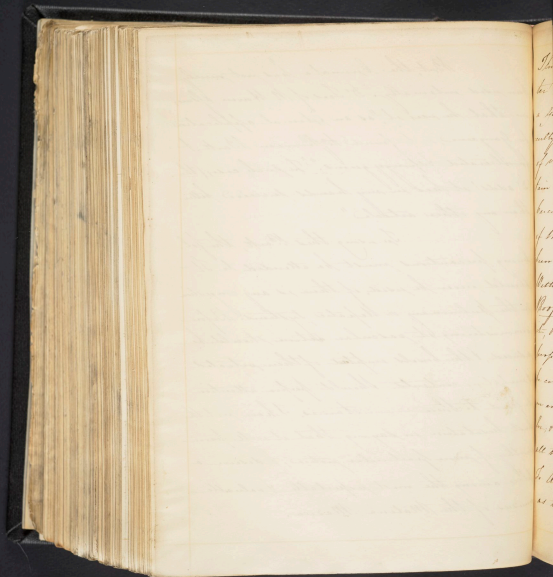
Being under the impression, that it possesses highly tonic properties, & feeling satisfied that it can be obtained more easily upon the Stomach, than the Quina, I conceive that it may be used with much advantage, as a substitute, in the various forms of Bala, in which that heavy medicine is indicated. This remark, I think particularly applicable to the cases of children, from the pains which I have ascribed above.

For Dyspepsia, when marked by a feeble & hypoblastic state of the system, I have no doubt this bark will prove serviceable; especially in this country, as the disease not unfrequently proceeds from the depraved habits of debauchees & drunkards.



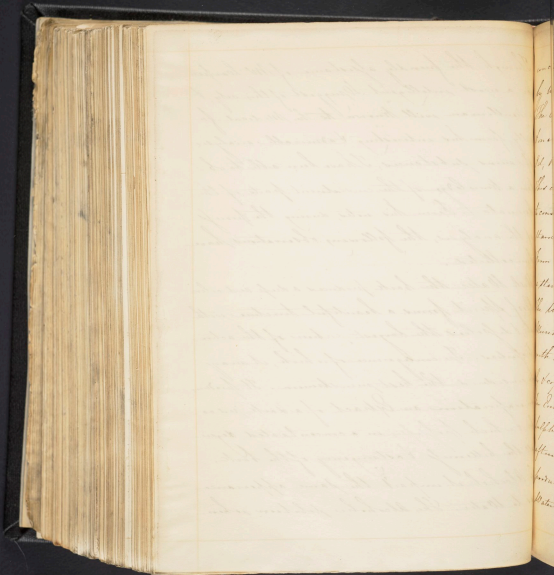
But, the Cinnamon has not merely
been used internally. Dr. Loe of M. Haven says,
"that he used it," as an external application
for Gargare, in perfumes to Peruvian Bark: &
for ulcerated & fungous gums." In such cases, (the
Dr. adds) it has in my hands succeeded better
than any other article."

In using this Bark, the fol-
lowing precautions must be attended to. It
should never be used, if there is any congestion
in the pulmonary or hepatic system. Before
administering it, peculiar notice should be
paid, to the bowels emptied of their vitiated
& irritating contents. Should proper attention
be paid to these circumstances, I have not the
least hesitation in saying, that it will prove
worthy of more particular notice, & deserve a
place among the most respectable & valuable
remedies of the Materia Medica.



Through the friendly assistance of Mr. Carpenter
a most intelligent Druggist of this city, &
a gentleman well known to the Medical fa-
culty, from his interesting & admirable analyses
of various substances, I have been able to ob-
tain a knowledge of the constituent parts of the
baccata. From his notes, during the process
of the analysis, the following observations have
been collected.

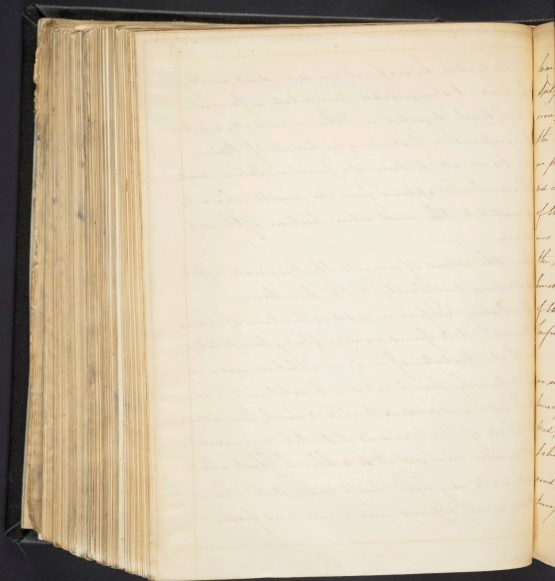
With Water the bark produces a deep red color.
Roe's Spirit forms a beautiful tincture, with-
out discoloring the largest portions of the active
principles. In consequence of which, it may
be considered the best menstruum. It produces
on evaporations an Extract of a dark red co-
lor, which preserves in a concentrated degree
all the bitterness & astringency of the bark.
In Alcohol it imparts the same appearance
as to Water. The Alcoholic solution when



is contained by evaporation is powdered, melting,
by water & a coagulated precipitate is formed.
The Extract digested in Ether is partially resolving
by evaporation produces a compound of Resin,
Oil, & a small portion of a peculiar saline matter.
This compound appears from its possible character
to constitute the most active portion of the sub-
stance.

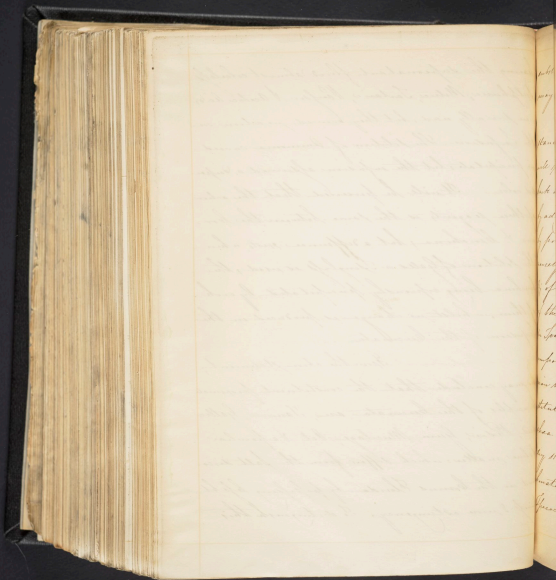
From the action of reagents the Circumata affords
a striking similarity to the Cinchon.

The Watery Infusion extends the action of Litmus.
Mucilage Reid forms a yellow, flaky precipitate
with it. Decolor of Lead in solution was quickly
& copiously precipitated. A solution of Tar-
tar Emetic was powdered turbid & slowly precipitated
sulphate of Iron powdered it turbid & immediately
afterwards changed it to a bluish black color &
produced a very light precipitate. With Lime
Water a very copious precipitate was formed.



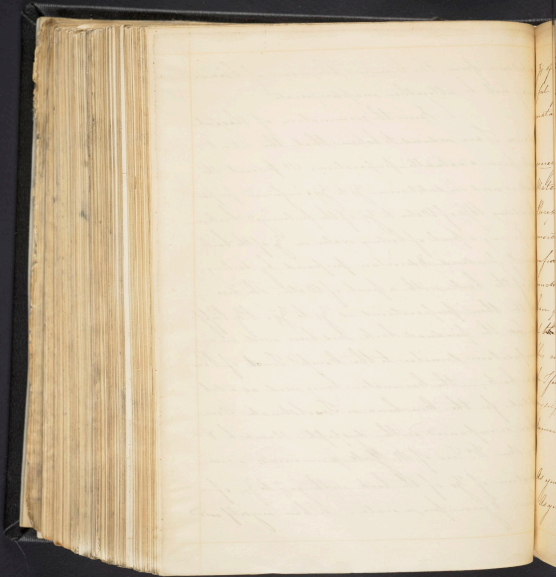
leaving the supernatant fluid almost colorless
Sulphuric, Nitric, Tartaric, Phosphoric & Acetic acids,
were successively used, but they caused no action on
the Infusion. The solution of Ammonia caused
no precipitate; but the infusion assumed a deeper
red color. It will be perceived that the action
of these reagents is the same between the Cor-
pus & Cinchona; but a difference exists, when
the solution of Gallie's Tincture is used, the
Cinchona being copiously precipitated by each
of them, whilst no change is produced in the
Infusion of the Corus.

From the above statement,
we may conclude that the constituent principles of the Corusata are, Tannin, Gallie's
Acid, Mucic, Gum, Mucilage, Oil & a peculiar
Saline matter, which differs from the Salt dis-
covered in the Corus Florida, by possessing less sol-
ubility & more stringency. To distinguish the



substance from the Cornine, the name of Birch
may not be altogether inappropriate.

From the examination of these sub-
stances I am induced to believe that the extract
will prove a valuable preparation. At present the
bark is used in substance \mathfrak{zj} to \mathfrak{zjij} : infusion prepared
by adding \mathfrak{ss} of Water to \mathfrak{zj} of the pulverized bark, or
by pouring a pint of boiling water on \mathfrak{zj} of the bark
rarsely powdered. Decoction prepared by boiling
 \mathfrak{zj} of the bark with a pint of Water. The dose
of the three preparations is \mathfrak{zj} to \mathfrak{zjij} . Key Relief
In Febr the powdered bark has been used in a
composition similar to the Compound Tincture of Peru-
vian bark, — the Cornuta being used as a sub-
stitute for the Burchina. In obstinate Scor-
shea accompanied with dyspeptic Stomach &
dry thirst Dr. Fors of M. York recommends a com-
bination of \mathfrak{zj} of the bark with \mathfrak{qij} to \mathfrak{zjij} of
Specac. & given for a water. When myself used

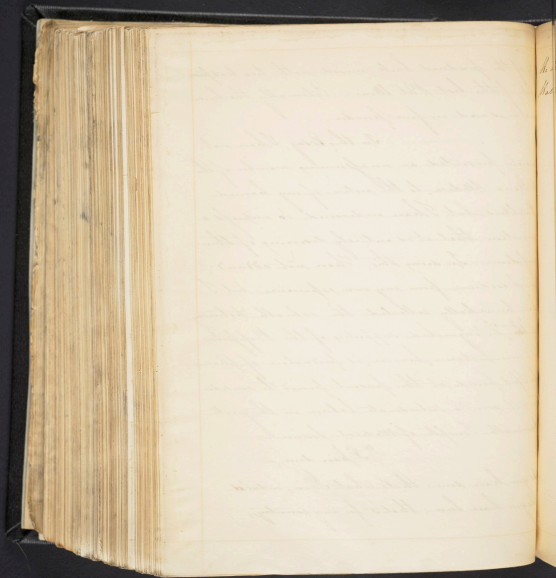


3j of the powdered bark mixed with two teaspoon-
ful of the best Port Wine. Externally the Lini-
menta is used in fine powder.

In this Essay, I have not
sincerely presented an unassuming member of the
Materia Medica, to the notice of my learned
Readers; but I have endeavored to impress a
conviction that it is entirely deserving of their
confidence. In doing this, I have not adduced
much evidence from my own experience, but I
have principally collected the valuable testimony
of ^{several} distinguished supporters of the Profession.
This circumstance, however, is productive of pleasure;
for I feel proud, at the present period, to consider
myself even a subordinate laborer in the great
venerable Temple of Medical Science.

"I have done, -

As you have done; that's what I can; indeed
As you have done; that's for my country;



He that has but affected his good will,
Hath overta'en mine art" and Name. *Hamlet*
Shakespeare.

Geographical Thesis
on
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